Small Business Innovation Research/Small Business Tech Transfer

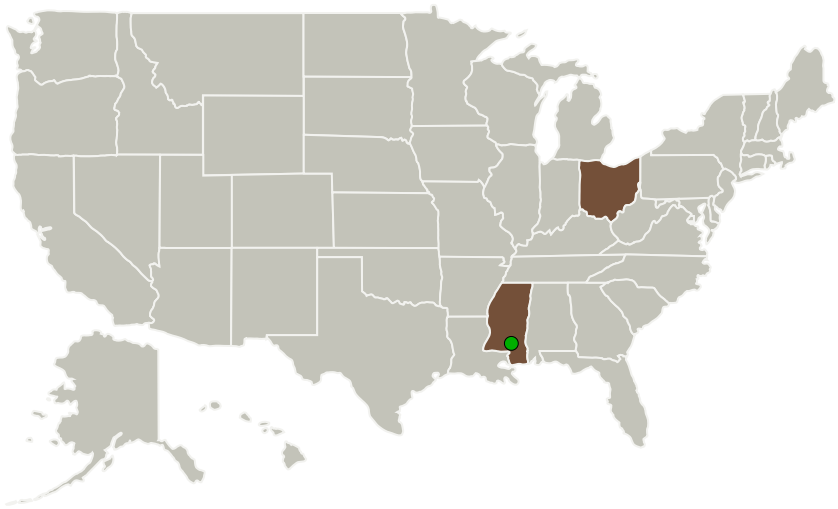
High Temperature Resistance Claddings for Nuclear Thermal Rockets, Phase I

Completed Technology Project (2014 - 2014)

Project Introduction

This program will develop a series of nano-/micro-composite coated nuclear reactor facing components using MesoCoat's CermaCladTM process. This proposed SBIR program will build on MesoCoat's extensive prior experience with high energy density fusion cladding systems for large area applications (pipe, plate, structures) where wear and/or corrosion limit the life of metal structures

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
MesoCoat, Inc.	Lead Organization	Industry	Euclid, Ohio
Stennis Space Center(SSC)	Supporting Organization	NASA Center	Stennis Space Center, Mississippi

Primary U.S. Work Locations	
Mississippi	Ohio

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Project Transitions

June 2014: Project Start

December 2014: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/137413)*

Images

Briefing Chart
High Temperature Resistance Claddings for Nuclear Thermal Rockets, Phase I
(https://techport.nasa.gov/image/132391)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

MesoCoat, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

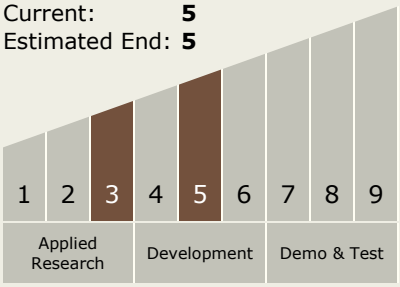
Carlos Torrez

Principal Investigator:

Evelina Vogli

Technology Maturity (TRL)

Start: **3**
Current: **5**
Estimated End: **5**



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Completed Technology Project (2014 - 2014)

Technology Areas

Primary:

- TX01 Propulsion Systems
  - TX01.4 Advanced Propulsion
    - TX01.4.3 Nuclear Thermal Propulsion

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System